THE TAXONOMY OF SOME INDO-PACIFIC MOLLUSCA

PART 7

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Abstract. New geographical records are recorded for *Coralliophila squamosissima* (E. A. Smith), *Terebra circumcincta* (Deshayes), *Xenuroturris kingae* Powell, *Turridrupa astricta* (Reeve) and *Conus spiculum* Reeve. *Vitularia crenifera* (Montrouzier) is compared to *V. miliaris* (Gmelin) and is reported from the Hawaiian and Marianas Is. The type species of *Coralliophila amirantium* E. A. Smith is illustrated and the species taxonomy discussed. *Latirus gibbus* Pease, is re-assigned from *Nassarius* and *Favartia* to *Cronia* H. & A. Adams and *Nassarius metuliformis* MacNeil is transferred from the Nassariidae to *Phos* Montfort, in the Buccinidae. *Engina bonasia* (v. Martens) has chronological priority over *E. zatricium* Melvill, *Nassarius subtranslucidus* (E. A. Smith) is a prior name for *N. hayashii* (Habe) and *Vexillum citrinum* (Gmelin) will replace *V. regina* (Sowerby). *Nassarius fijiensis* Ladd, is a synonym of *Phos (Philindophos) vitiensis* Ladd, and is re-assigned to the Buccinidae.

Family MURICIDAE

Genus **Vitularia** Swainson, 1840

Vitularia Swainson, 1840, Treat. Malac. p. 297. Type species by M *V. tuberculata* Swainson, 1840 = *Murex miliaris* Gmelin, 1791. Recent, Indo-Pacific.

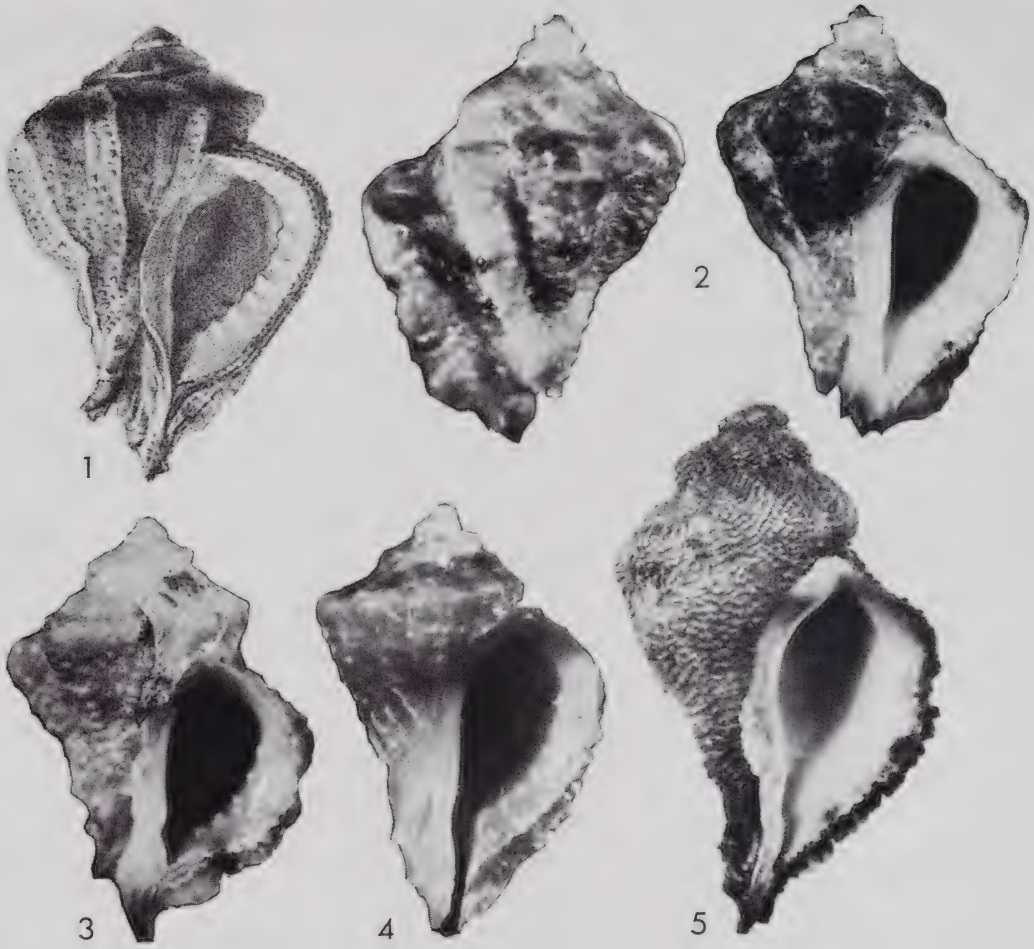
1929. *Transtrafer* Iredale, Mem. Queensl. Mus. 9(3):290, 295. Type species by OD *T. longmani* Iredale, 1929 = *Murex miliaris* Gmelin, 1791.

Vitularia crenifera (Montrouzier in Souverbie, 1861) (Figs. 1-4)

1861. *Murex crenifer* Montrouzier in Souverbie, J. Conchyl. 9: 279, pl. 11, figs. 9, 10.
1880. *Vitularia crenifer* Montrouzier, Tryon, Man. Conch. 2: 133, pl. 35, fig. 395; 1976 Fair. *Murex* book p.34, text fig. 19.
1959. *Transtrafer* sp. Kira, Col. Ill. shells Japan 1: 64, pl. 25, fig. 11
1960. *Transtrafer asiaticus* Kuroda, Cat. Moll. fauna Okinawa p.74.
1962. *Transtrafer asiatica* Kuroda, Kira, Col. Ill. shells Japan, rev. ed. 1: 64, pl. 25, fig. 11.
1966. *Vitularia crenifera* (Montrouzier), Habe & Kosuge, Shells world col. 2: 54, pl. 20, fig. 1.

TYPE LOCALITY. Balade, New Caledonia (*V. crenifera*); Okinawa, Ryukyu Is (*V. asiatica*).

This species has been either confused with the larger and more prominently sculptured *Vitularia miliaris* (Gmelin) (Fig. 5), or has been re-described as a new species. Recently collected specimens from Bolo Pt., Okinawa, Ryukyu Is (Figs. 2, 3 — *leg.* A. Deynzer) are without doubt conspecific with New Caledonian populations of *V. crenifera*. The specimen from Keehei, Hawaiian Is, 46 m (Fig. 4) represents a new range-extension.



Figs. 1-5. 1-4. *Vitularia crenifera* (Montrouzier). 1. Type-figure, length 35.0 mm. 2,3. Specimens from Bolo Pt., Okinawa, Ryukyu Is; 17.8 mm and 18.1 mm respectively. 4. Specimen from Keehei, Hawaiian Is, 46 m; 9.0 mm. 5. *Vitularia miliaris* (Gmelin). Vatia wharf, Fiji Is; 51.2 mm.

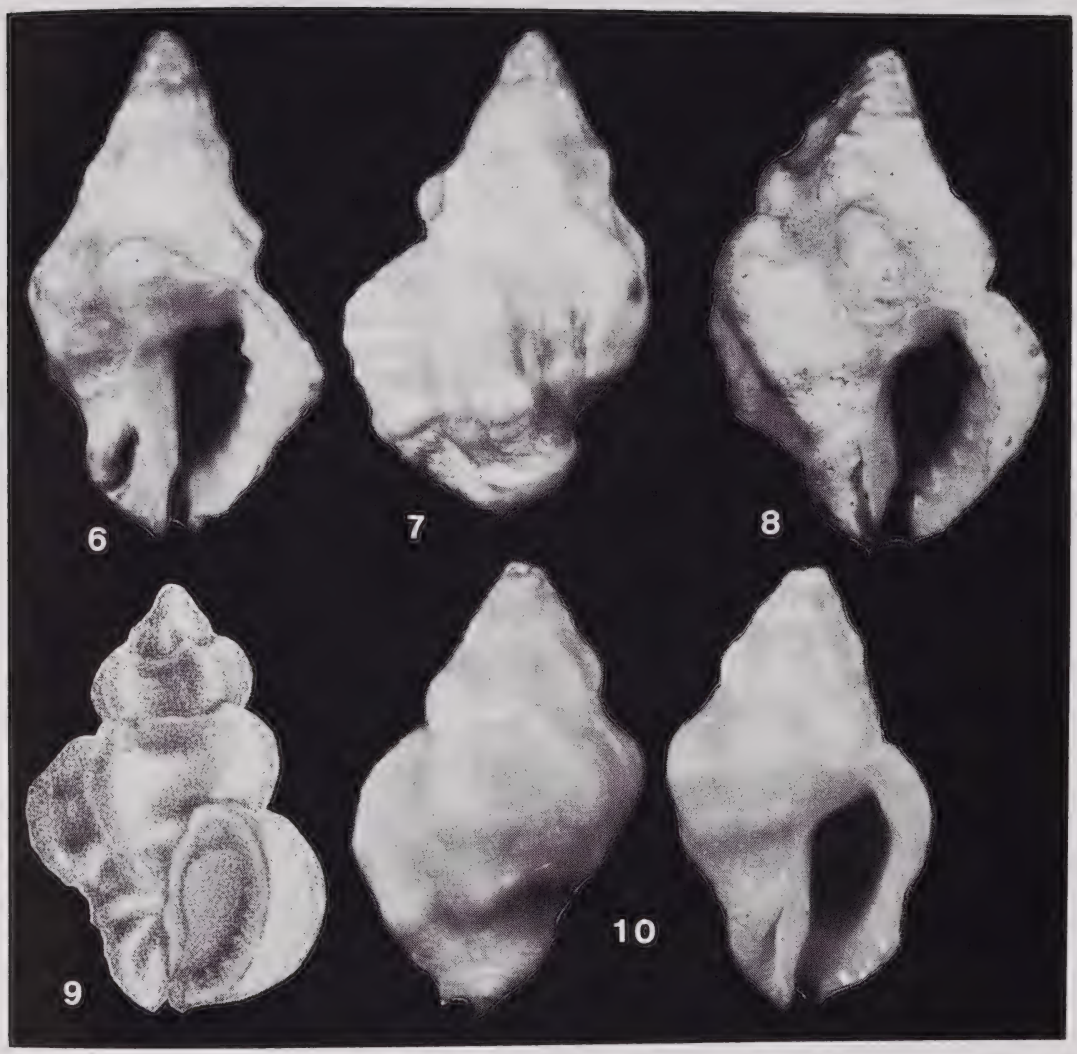
Subfamily THAIDINAE Jousseaume, 1888

Genus **Cronia** H. & A. Adams, 1853

Cronia H. & A. Adams, 1853, Gen. Rec. Moll. 1: 128. Type species by M *Purpura amygdala* Kiener, 1835. Recent, Indo-Pacific.

Cronia gibba (Pease, 1865) (Figs. 6-11)

1865. *Latirus gibbus* Pease, Proc. Zool, Soc. Lond. p.54; 1868 Pease, Americ. J. Conch. 3(4): 279, pl. 23, fig. 17.
1873. *Murex crossei* Lienard, J. Conchyl. 21: 285; 1874 Lienard, J. Conchyl. 22: 70, pl. 1, fig. 2; 1880 Tapparone-Canefri, Ann. Soc. Malac. Belg. 15: 20.
1904. *Coralliophila dissimulans* Preston, J. Malac. 11(4): 77, pl. 7, figs. 5, 6.
1930. *Drupa gibba* Pease, Fulton, Proc. Malac. Soc. Lond. 19: 18.
1976. ?*Favartia crossei* (Lienard), Radwin & D'Attilio, Murex shells world p. 146, pl. 24, figs. 17, 18.



Figs. 6-10. *Cronia gibba* (Pease). 6. Lectotype MCZ No. 261182; length 12.6 mm. 7. Paralectotype MCZ (immature); 10.6 mm. 8. Specimen from Palmyra I (senile specimen), AMS No. C-61091; 15.8 mm. 9. Type-figure of *Murex crossei* Lienard; 17.0 mm. 10. Holotype of *Coralliophila dissimulans* Preston (immature), BMNH No. 1905.2.8.9.; 9.3 mm.

TYPE LOCALITY. Howland I, Pacific Ocean (*gibba*); Mauritius (*crossei*); Ceylon (*dissimulans*).

Type specimens. The lectotype and paralectotype of *Latirus gibbus* Pease, are in the Museum of Comparative Zoology, Harvard, No. 261182, dimensions of lectotype length 12.6 mm, width 6.2 mm. The lectotype has 6-7 axial ribs on the penultimate and 5 ribs on the body whorl, the outer lip has 6 denticles, the columella 3 denticles and the interior of the aperture is rose-violet (Fig. 6). The type-specimen of *Murex crossei* Lienard remained in Lienard's collection whose whereabouts are unknown. The holotype of *Coralliophila dissimulans* Preston, is in the British Museum (Natural History), London, No. 1905.2.8.9., length 9.3 mm, width 5.4 mm. The holotype has 6 axial ribs on the penulti-

mate and 5 ribs on the body whorl and impressed, wavy sutures; being an immature individual, the apertural denticles have not formed as yet (Fig. 10).

G. & H. Nevill (1875) suggest that *Latirus gibbus* is a synonym of *Murex crossei* and report the species from Ceylon. Vokes (1971) tentatively placed *M.crossei* in the Nassariidae while Radwin & D'Attilio (1976) tentatively assign the species to the muricid genus *Favartia* Jousseaume. Fulton (1930), whose paper appears to have been overlooked by recent workers, gave a detailed synonymy of the species and stated that the taxa *M.crossei* Lienard and *Coralliophila dissimulans* Preston, were synonyms of *Latirus gibbus* Pease. Having examined the type-specimens of the taxa concerned, I concur with Fulton as to specific synonymy. The species, however, is neither a species of Nassariidae nor a member of *Favartia* but belongs to the moruline genus *Cronia* H. & A. Adams, closely resembling *Cronia ochrostoma* (Blainville) (see Cernohorsky 1976). Both these species are similar in shape, with a sculpture of swollen, nodose ribs, adpressed and wavy sutures and denticles on the outer lip. The radula of *C.gibba* (extracted and mounted by Dr. W. F. Ponder, AMS No. C-61091) has a rachidian with 3 cusps and a simple, unicuspid sickle-shaped lateral and conforms to the radular pattern of *Cronia* (Fig. 11).

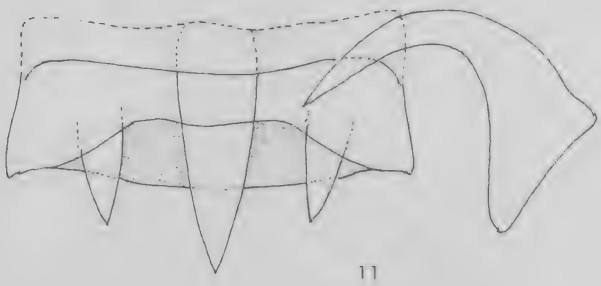


Fig. 11. *Cronia gibba* (Pease). Half-row of radula.

Radwin & D'Attilio (op. cit.) correctly point out that gerontic individuals have quite a different appearance and become rather coarse and heavy with thickened varices and more obtuse whorls. Their illustration of the gerontic specimen on plate 24, fig. 18, is closely similar to the type of *Murex crossei* (Fig. 9), while the individual illustrated in fig. 17 resembles the lectotype of *Latirus gibbus*. Meagre records show that *Cronia gibba* is widely distributed throughout the Indo-Pacific, the known range extending from Mauritius to Ceylon and the Line Islands.

Family CORALLIOPHILIDAE Chenu, 1859

The family name Coralliophilidae Chenu, 1859, has chronological priority over Coralliophilidae Hoyle, 1888.

Genus **Coralliophila** H. & A. Adams, 1853

Coralliophila H. & A. Adams, 1853, Gen. Rec. Moll. 1: 135. Type species by SD (Iredale, 1912) "*Murex neritoideus* Chemnitz" = *Purpura violacea* Kiener, 1836. Recent, Indo-Pacific.

Subgenus **Pseudomurex** Monterosato, 1872

Coralliophila (Pseudomurex) squamosissima (E. A. Smith, 1876) (Figs. 12-14)

1847. ? *Fusus inflatus* Dunker in Philippi, Abb. Beschr. Conchyl. 2: 193, pl. 4, fig. 2
1876. *Rhizochilus (Coralliophila) squamosissimus* E. A. Smith, Ann. Mag. Nat. Hist. (4), 17: 404; 1879 E. A. Smith, Phil. Trans. R. Soc. Lond. 168: 483, pl. 51, figs. 8, 8a.
1895. *Coralliophila stearnsii* Pilsbry, Cat. mar. Moll. Japan p. 45, pl. 2, fig. 12; 1971 Kuroda & Habe, Seashells Sagami Bay, p. 155, pl. 43, fig. 14
1962. *Coralliobia stearnsi* (Pilsbry), Kira, Shells west. Pacif. col. 1: 68, pl. 26, fig. 8.
1972. *Coralliophila (Latimurex) meyendorffi* (Calcara), Kilburn, Ann. Natal Mus. 21(2): 412, fig. 9c (*non Murex meyendorffii* Calcara, 1845).
1977. *Coralliophila (Pseudomurex) squamosissima* (E. A. Smith), Kilburn, Ann. Natal Mus. 23(1): 189.

TYPE LOCALITY. Rodriguez I, Indian Ocean (*squamosissima*); Japan (*stearnsii*).

Type specimens. The holotype of *C. squamosissima* is in the British Museum (Natural History), London, No. 1876.5.1.88., length 30.7 mm, width 20.0 mm. The type has 13 irregular axial ribs and *c*. 10-11 primary and secondary spiral cords on the penultimate and 15 ribs and 21 cords on the body whorl (Fig. 12).

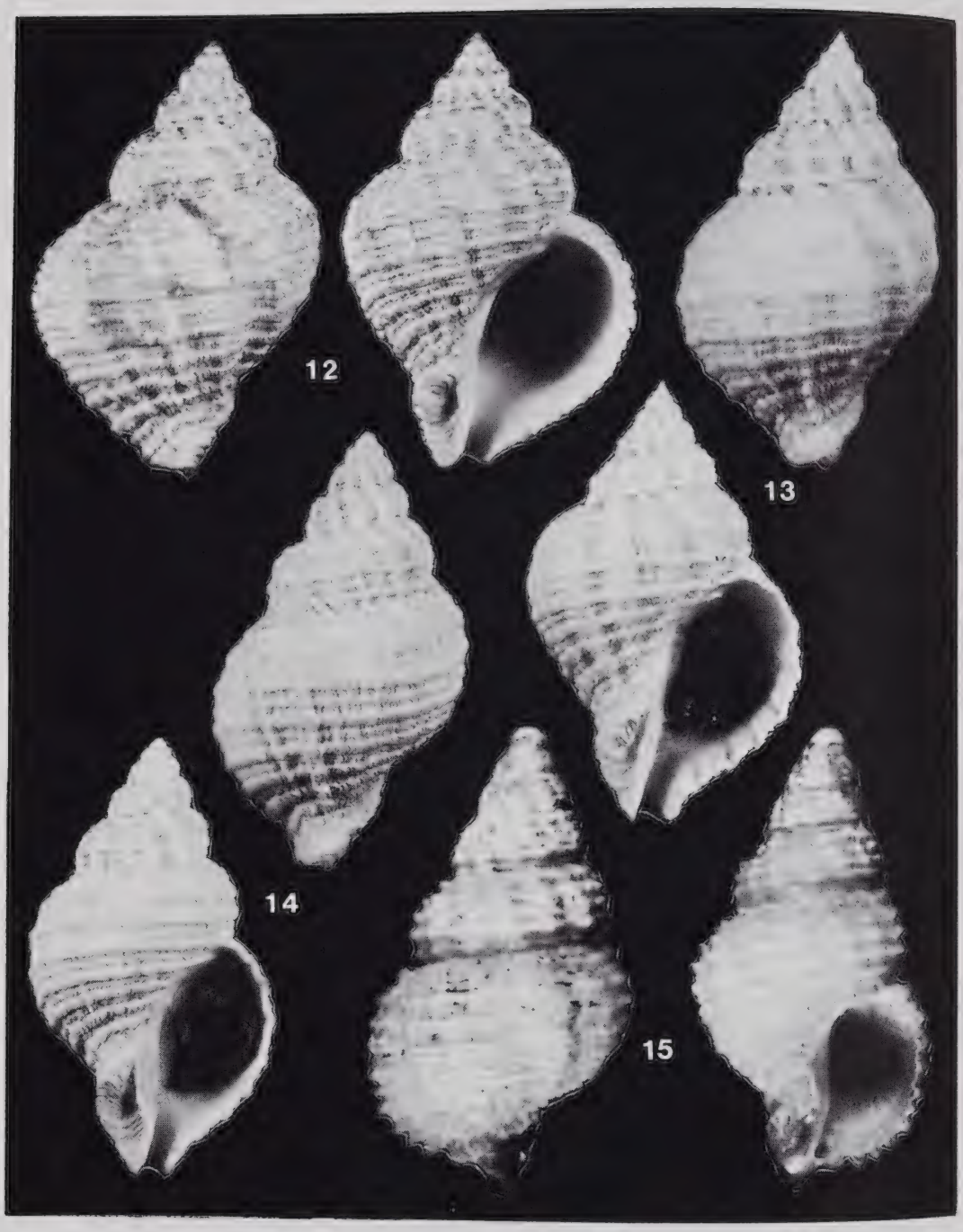
A cluster of about 15 specimens have recently been collected from the side of a sea-anemone at Bolo Pt., Okinawa, Ryukyu Is (*leg*. A. Deynzer). These 15 specimens clearly demonstrate variability of shape and culpture in Coralliophilidae, some individuals being considerably narrower than others and some specimens also lack axial ribs on the body whorl. The teleoconch has 6½-6¾ mature whorls and the protoconch 3 embryonic whorls, the colour is creamy-white and the operculum has a lateral nucleus.

C. squamosissima bears a close resemblance to the type figure of *Fusus inflatus* Dunker in Philippi, described from Java, Indonesia. Ladd (1977) recently illustrated "*Latiaxis (Latimurex) inflata* (Dunker)" from Late Miocene deposits of Eniwetok, Marshall Is, but this specimen closely resembles the Pacific *Coralliophila bulbiformis* (Conrad, 1837). To complicate matters, the type of *Fusus inflatus* Dunker in Philippi, is not in the Dunker collection of the Zoological Museum of the Humboldt University, Berlin (Dr. R. Kilias, *in litt.*) and probably remained in Winter's private collection. I therefore consider *Fusus inflatus* Dunker in Philippi to be a *nomen dubium* and adopt *C. squamosissimus* for the species illustrated. I follow Kilburn (1977) in considering *C. stearnsii* Pilsbry, a synonym of *C. squamosissima*.

Coralliophila amirantium E. A. Smith, 1884 (Fig. 15)

1884. *Coralliophila amirantium* E. A. Smith, Rept. Zool. Coll. voy. H.M.S. "Alert" p. 497, pl. 44, fig. M (spelled *amirantensis* on plate expl.).
1978. *Coralliophila amirantensis* Smith, D'Attilio, Festivus 10(10): 73 (invalid emendation).

TYPE LOCALITY. Marie-Louise, Amirantes Is, Indian Ocean. Smith (1884) also listed "African I and Eagle I" among his localities, but the two syntypes came from Marie-Louise I.



Figs. 12-15. 12-14. *Coralliophila (Pseudomurex) squamosissima* (E.A. Smith). 12. Holotype BMNH No. 1876.5.1.88.; length 30.7 mm. 13, 14. Specimens from Bolo Pt., Okinawa, Ryuku Is. 13. Broad form; 35.7 mm. 14. Slender form; 40.7 mm. 15. *C. amirantium* E.A. Smith. Syntype BMNH No. 1882.12.6.176.; 11.3 mm.

Type specimens. The two syntypes of *C. amirantium* are in the British Museum (Natural History), London, No. 1882.12.6.176-177, dimensions of illustrated syntype length 11.3 mm, width 6.3 mm (Fig. 15).

D'Attilio (1978) recently re-introduced the species under the invalid name "*amirantensis*" into coralliophilid nomenclature. Smith (op. cit.) spelt the specific name "*amirantium*" on pages XX, 632 and 497 and only once on page 678 in the plate explanations the specific name was spelt "*amirantensis*". The label accompanying the two syntypes reads "*C. amirantium*" and von Martens (1885) was the first reviser who selected the spelling "*amirantium*" in accordance with art. 32 (b) of the Code of ICZN (1964).

C. amirantium closely resembles *C. crebrilamellosa* (Sowerby, 1913) from Japan.

Family BUCCINIDAE

Genus **Phos** Montfort, 1810

Phos Montfort, 1810, Conchyl. Syst. 2: 495. Type species by OD *Murex senticosus* Linnaeus, 1758. Recent, Indo-Pacific.

Phos metuliformis (MacNeil, 1960) (Fig. 16)

1960. *Nassarius (?Niotha) metuliformis* MacNeil, U.S. Geol. Surv. Prof. Pap. 339: 80, pl. 3, fig. 29.

TYPE LOCALITY. Yonabaru clay member, Miocene of Okinawa, Ryukyu Is.

Type specimen. The holotype of *P. metuliformis* is in the National Museum of Natural History, Washington, No. USNM 562704, dimensions length 15.0 mm, width 6.4 mm (Fig. 16).

MacNeil (1960) remarked that no Indo-Pacific species of *Nassarius* resembled his *metuliformis* and that the species resembled *Phos metuloides* Maury, 1917, most closely. An examination of the holotype of *metuliformis* shows that the species is not a nassarid and that it belongs in the Photinae, family Buccinidae.

Subgenus **Philindophos** Shuto, 1969

Philindophos Shuto, 1969, Mem. Fac. Sci. Kyushu Univ., ser. D, Geol. 19 (1): 118. Type species by OD *Phos dijki* K. Martin, 1884. Mio/Pliocene of Indonesia and the Philippines.

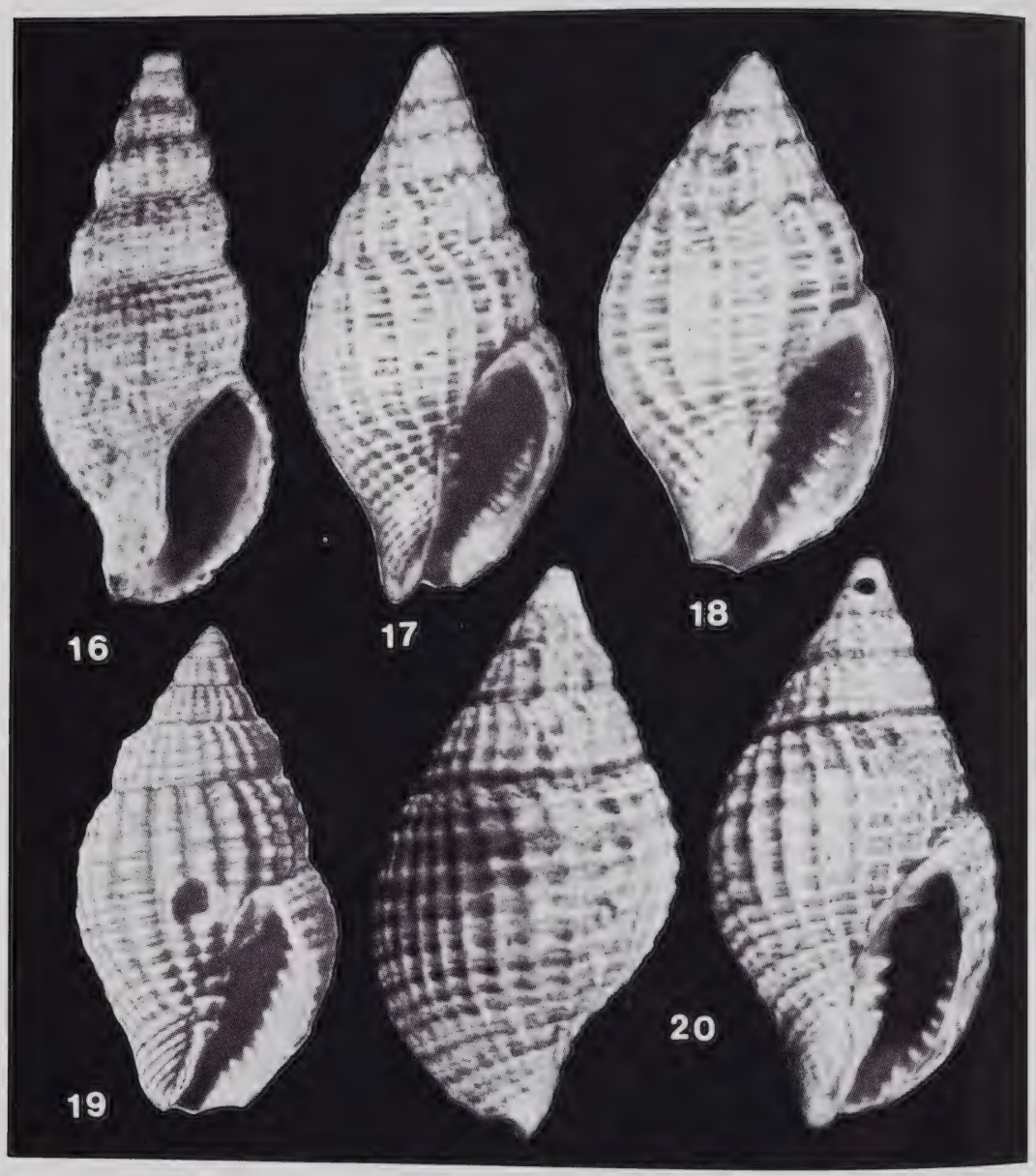
Phos (Philindophos) vitiensis (Ladd, 1934) (Figs. 19, 20)

1934. *Phos vitiensis* Ladd, Bern. P. Bishop Mus. Bull. 119: 226, pl. 40, fig. 6.
1977. *Nassarius (Niotha) fijiensis* Ladd, U.S. Geol. Surv. Prof. Pap. 533: 54, pl. 18, figs. 3, 4 (*nom. subst. pro Phos vitiensis* Ladd, 1934).

TYPE LOCALITY. St. 165, upstream from Wailoa River, *c.* 1 mile (1.6 km) W. of Nasogo, 995 feet (303 m), Upper Miocene of Viti Levu, Fiji Is.

Type specimen. The holotype of *P. vitiensis* is in the Bernice P. Bishop Museum, Honolulu, No. 1165, length 18.0 mm, width 9.5 mm, height of aperture 9.9 mm.

Ladd (1934) originally placed *vitiensis* in the genus *Phos* and remarked that the species should perhaps be placed in a separate subgenus. In a later paper Ladd (1977) re-assigned the species to the Nassariidae and changed the name to *Nassarius fijiensis* on account of a prior *Nassarius vitiensis* (Rousseau, 1854).



Figs. 16-20. 16. *Phos metuliformis* (MacNeil, 1960). Holotype USNM No. 562704; length 15.0 mm. 17, 18. *P. (Philindophos) dijki* K. Martin (From Shuto, 1969, pl. 9, figs. 8, 14). 17. Slender form; 16.5 mm. 18. Broad form; *c.* 13.7 mm. 19, 20. *P. (P) vitiensis* Ladd. 19. Holotype BPBM No. 1165; 18.0 mm. 20. Specimen from Viti Levu, Pliocene of Fiji Is, USNM No. 175058; 16.1 mm.

Shuto (1969) provided a new buccinid subgenus for these species which differ from *Phos s. str.* in their abbreviated, ovate shape, narrowly channeled sutures, strong lirations within the aperture and strong, almost costellariid-like 3-4 folds on the columella and denticle on the parietal wall. The species *P. vitiensis* (Figs. 19, 20) is very similar to *P. dijki* K. Martin, 1894, and does not differ specifically from *P. dijki* reported and illustrated by Shuto (op. cit.) from the Philippines (Figs. 17, 18). *P. dijki* has been recorded from Lower Miocene to Lower Pliocene deposits of Indonesia and Pliocene deposits of the Philippines, while *P. vitiensis* is known from the Upper Miocehe to Pliocene deposits of the Fiji Islands. The species *Nassa (Hinia) ickei* K. Martin, 1914, from the Upper Eocene of Java is also a photine buccinid and is also best assigned to *Phos (Philindophos).*

Genus **Engina** Gray, 1839

Engina Gray, 1839, Zool. Capt. Beechey's Voy. "Blossom", p. 112. Type species by SD (Gray, 1847) *E. zonata* Gray, 1839 = *Purpura turbinella* Kiener, 1836. Recent, Caribbean.

Engina bonasia (von Martens, 1880) (Fig. 21)

1880. *Plicatella (Peristernia) bonasia* v. Martens, Beitr. Meeresf. Mauritius & Seychellen, p. 246, pl. 20, fig. 6.

1893. *Engina zatricium* Melvill, Proc. Malac. Soc. Lond. 1:51; 1895 Melvill & Standen, J. Conch. 8: 106, pl. 2, fig. 4; 1975 Cernohorsky, Rec. Auckland Inst. Mus. 12: 180, fig. 9; 1978 Hinton, Guide Shells Papua New Guinea, pl. 31, fig. 21.

1971. *Engina phasinola* (Duclos), Cernohorsky, Rec. Auckland Inst. Mus. 8: 159, fig. 79; 1972 Cernohorsky, Mar. shells Pacific 2: 144, pl. 39, fig. 5 (*non Columbella phasinola* Duclos, 1840).

Fig. 21. *Engina bonasia* (v. Martens). Holotype Zool. Mus. Humboldt Univ., Berlin; length 14.2 mm (Photo courtesy Ms Vera Kopske, ZMHUB).

TYPE LOCALITY. Seychelles Is (*bonasia*); Lifu, Loyalty Is (*zatricium*).

Type specimens. The holotype of *E. bonasia* is in the Zoological Museum, Humboldt University, Berlin, length 14.2 mm, width 8.4 mm (Fig. 21). Nine syntypes of *E. zatricium* Melvill are in the University Museum, Manchester (K. Way, *in litt.*).

Originally described in the family Fasciolariidae, *E. bonasia* proves to be conspecific with the buccinid *E. zatricium* Melvill, which is now relegated to the synonymy of *E. bonasia*.

Family NASSARIIDAE

Genus **Nassarius** Dumeril, 1806

Nassarius Dumeril, 1806, Zool. Analyt. p. 166. Type species by SM (Froriep, 1806) *Buccinum arcularia* Linnaeus, 1758. Recent, Indo-Pacific.

Nassarius subtranslucidus (E. A. Smith, 1903) (Figs. 22-26)

1903. *Nassa subtranslucida* E. A. Smith, Fauna & Geog. Mald. & Laccad. Archip. 2 (2): 607, pl. 35, fig. 11.
1961. *Zeuxis hayashii* Habe, Col. Illust. shells Japan 2: App. p. 23, pl. 32, fig. 15.
1964. *Niotha hayashii* (Habe), Habe, Shells west. Pacif. col. 2: 99, pl. 32, fig. 15.

TYPE LOCALITY. Sth. Nilandu Atoll, Maldive Is, 1-36 fathoms (2-66 m) (*subtranslucidus*); off Isshiki, Aichi Pref., Enshu-nada, Japan, *c*.50 m (*hayashii*).

DISTRIBUTION. From the Maldive Is and Sri Lanka to Indonesia, N.W. Australia, the Philippines and Japan; subtidal, to 69 m.

Type specimens. The holotype of *N. subtranslucidus* is in the British Museum (Natural History), London, No. 1903.9.17.41., length 8.0 mm, width 3.9 mm. (Fig. 22). The holotype of *N. hayashii* (Habe) is in the National Science Museum, Tokyo, No. 43866, length 11.7 mm, width 6.3 mm (Fig. 25).

Specimens of *N. subtranslucidus* have been collected in the Kai and Aru Islands, Moluccas, Indonesia, by the "Mariel King Memorial Moluccas Expedition 1970". The species is variable in sculpture and the axial ribs number up to 26 on the body whorl, but these ribs may be weak or even absent in some individuals. The base colour is fawn and the ornamentation consists of irregular, often dilacerated orange-brown markings and brown spots at sutures and the protoconch has glassy-brown, keeled embryonic whorls. The recently described *N. hayashii* (Habe) from Japan, does not differ in any way from *N. subtranslucidus* (E. A. Smith).

Family COSTELLARIIDAE

Genus **Vexillum** Roeding, 1798

Vexillum Roeding, 1798, Mus. Bolten, p. 138. Type species by SD (Woodring, 1928) *V. plicatum* Roeding, 1798 = *Voluta plicaria* Linnaeus, 1758. Recent, Indo-Pacific.

Vexillum citrinum (Gmelin, 1791) (Figs. 27, 28)

1788. "*Voluta plicaria valde elongata*" Chemnitz, Neues syst. Conchyl. Cab. 10: 173, pl. 151, figs. 1444, 1445 (*non-binom.*)

Figs. 22-26. *Nassarius subtranslucidus* (E. A. Smith). 22. Holotype BMNH No. 1903.9.17.41.; length 8.0 mm. 23. Specimen from between Warbal and Ur I, Kai Is, Indonesia, 59 m-62 m; WAM, 9.0 mm. 24. Specimen from Tg Ratoe, Maikoor, Aru I, Indonesia, 4 m; WAM, 9.3 mm. 25, 26. *N. hayashii* (Habe). 25. Holotype NMT No. 43866; 11.7 mm. 26. Paratype NMT; 12.3 mm.

1791. *Voluta citrina* Gmelin, Syst. Naturae ed. 13, 1 (6): 3456.
1807. *Voluta elegans* Link, Beschr. Nat.-Samml. Univ. Rostock Pt. 3:127 (ref. to Chemnitz, *op. cit.*, figs. 1444, 1445) (*non* Gmelin, 1791).
1825. *Mitra regina* Swainson in Sowerby, Cat. shells coll. Tankerville p.77 (*nomen nudum*).
1828. *Mitra regina* Sowerby, Gen. Rec. & fossil shells, 2 (31): pl. 250, fig. 4; 1838 Kiener, Spéc. gén. icon. coq. viv. 3:66, pl. 19, figs. a, a; 1839 Kuester, Syst. Conch. Cab. Martini & Chemnitz 5 (2): 43, pl. 8, figs. 5, 6; 1844 Reeve, Conch. Iconica 2: pl. 7, fig. 48; 1859 Chenu, Man. Conchyl. 1: 196, fig. 1029; 1874 Sowerby, Thes. Conchyl. 4:28, pl. 4, fig. 53; 1935 Dautzenberg, Mem. Mus. R. d'Hist. Nat. Belg. 2 (17): 135; 1940 M. Smith, World-wide sea shells, p. 69, fig. 927; 1951 Webb, Handb. shell coll. ed. 9:113, fig. 2; 1966 Melvin, Sea shells world p.106, pl. 43, fig. 17.
1882. *Turricula regina* Sowerby, Tryon, Man. Conch. 4:164, pl. 48, fig. 382.
1961. *Vexillum regina* (Sowerby), J. Cate, Veliger 4 (2): 76, pl. 18, figs. 1a, b; pl. 19, fig. 1; 1962 J. Cate, Veliger 5 (1): 55; 1970 Cernohorsky, Bull. Auckland Inst. Mus. No. 8: 53; 1974 Dance, Encycl. shells p. 171, 2 textfigs.

TYPE LOCALITY. Originally none. Amboina, Moluccas, Indonesia, here designated (*citrinum*); China Seas (*regina* — originally no locality given, but "China Seas" designated by J. Cate (1961)).

DISTRIBUTION. From East Africa, to the Andaman Is, Indonesia, the Philippines, China and the Solomon Is.

Type specimen. The type specimens of *Voluta citrina* Gmelin are no longer extant and figure 12 on plate 2 from Valentyn (1773) (Fig. 27) is here designated as the illustrated lectotype of *V. citrina* (length from figure 60.0 mm).

Figs. 27, 28. *Vexillum citrinum* (Gmelin). 27. Lectotype figure from Valentyn, 1773, pl. 2, fig. 12; length *c.*60.0 mm (engraved in reverse). 28. Specimen from Nossi-Be, Madagascar, AMS No. C-113192; 57.3 mm.

Gmelin (1791) described *Voluta citrina* as a new species and cited figure 12 on plate 2 from Valentyn (1773) as reference. Valentyn's drawing of his "Gnemon Schnecke" depicts the species later named *Mitra regina* Sowerby, 1828, and in the drawing the aperture is shown on the left hand side in error. During a revision of Gmelin's Mitridae names, the unused and forgotten name *Voluta citrina* was discovered and the International Commission on Zoological Nomenclature has been petitioned for a suppression of *Voluta citrina* Gmelin, 1791, as a *nomen oblitum* in favour of its junior synonym *Mitra regina* Sowerby, 1828 (Cernohorsky 1967). The Commission did not process the application at that time and only recently reviewed the case (The Secretary, *in litt.* 10-XI-1978). The interim appearance of emended articles 23 and 79 of the Code of ICZN (1974) has changed the status of *V. citrina* and *M. regina*. The latter taxon can no longer be regarded as having been in "general current use" since the species-group name *Mitra regina* has been used only 6 times by at least 5 different authors between 1917 to 1967 instead of the required 10 times usage by 5 different authors.

Species described after 1828 and considered conspecific with *Vexillum citrinum* (Gmelin) have been omitted from the synonymy list.

Family TEREBRIDAE

Genus **Terebra** Bruguière, 1789

Terebra Bruguière, 1789, Encycl. Meth. Hist. Nat. vers 1:XV. Type species by SM (Lamarck, 1799) *Buccinum subulatum* Linnaeus, 1767. Recent, Indo-Pacific.

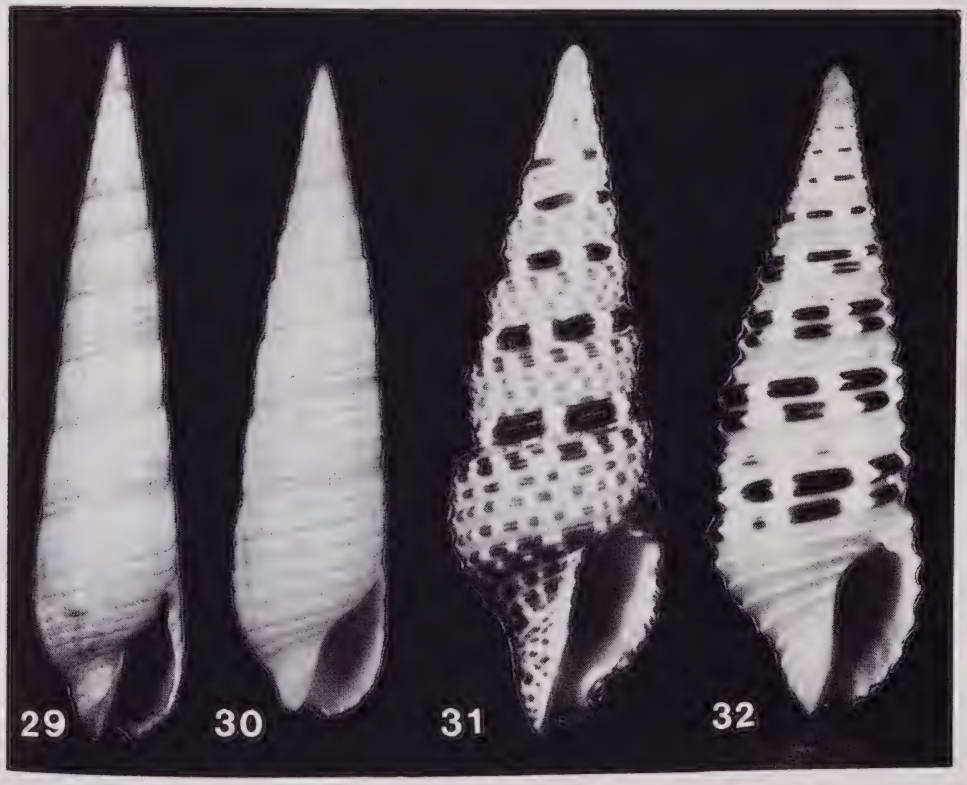
Terebra circumcincta Deshayes, 1857 (Figs. 29, 30)

1857. *Terebra circumcincta* Deshayes, J. Conchyl. 6: 77, pl. 3, fig. 9; 1860 Reeve, Conch. Iconica, Mon. *Terebra* pl. 15, sp. 70; 1885 Tryon, Man. Conch. 7: 13, pl. 11, figs. 8, 9; 1969 Cernohorsky, Veliger 11 (3): 213; 1971 Powell, Rec. Auckland Inst. Mus. 8: 225, fig. 26; 1974 Powell, Rec. Auckland Inst. Mus. 11: 206.

1964. *Perirhoe circumcincta* (Deshayes), Cotton, Rec. Americ.-Austral. Sci. Exp. Arnhem Land 4: 35, pl. 5, No. 10.

TYPE LOCALITY. Red Sea (= error ?).

Type specimen. The holotype of *T. circumcincta* is in the British Museum (Natural History), London, length 38.0 mm, width 8.0 mm (Fig. 29).



Figs 29-32. 29, 30. *Terebra circumcincta* Deshayes. 29. Holotype BMNH No. 1978 150; length 38.0 mm. 30. Specimen from False Entrance, N.W. of Noumea, New Caledonia; 34.8 mm. 31. *Xenuroturris kingae* Powell. Orote Pt., Guam I, Marianas Is, 18-23 m; 21.7 mm. 32. *Turridrupa astricta* (Reeve). Orote Pt., Guam I, Marianas Is, 18-22 m; 16.1 mm.

The type locality of "Red Sea" remains unconfirmed. According to a specimen in the British Museum, the species occurs at Port Curtis, Queensland, Australia. Cotton (1964) reports *T. circumcincta* from Port Keats, Arnhem Land, Northern Territory, and Powell (1971) from the Bay of Islands, Northern New Zealand. Recently collected specimens from False Entrance, N.W. of Noumea, New Caledonia (*leg.* M. Marrow) (Fig. 30), confirm the species continuous range from Arnhem Land, N. Australia to Northern New Zealand.

Family TURRIDAE

Genus **Xenuroturris** Iredale, 1929

Xenuroturris Iredale, 1929, Mem. Queensl. Mus. 9 (3): 285. Type species by OD *X. legitima* Iredale, 1929 = *Pleurotoma cingulifera* Lamarck, 1822. Recent, Indo-Pacific.

Xenuroturris kingae Powell, 1964 (Fig. 31)

1964. *Xenuroturris kingae* Powell, Indo-Pacif. Moll. 1 (5): 325, pl. 252, fig. 6.

TYPE LOCALITY. Off Keehi, Oahu I, Hawaiian Is, 20-40 fathoms (36 m-73 m).

Type specimen. The holotype of *X. kingae* is in the Bernice P. Bishop Museum, Honolulu, length 18.2 mm, width 6.4 mm.

A specimen of *X. kingae* has been recently collected off Orote Pt., Guam I, Marianas Is, in 18 m-23 m (*leg.* A. Deynzer), dimensions of illustrated specimen length 21.7 mm, width 5.4 mm (Fig. 31). Originally described from the Hawaiian Is, the Marianas Is record represents a considerable westward extension.

Genus **Turridrupa** Hedley, 1922

Turridrupa Hedley, 1922, Rec. Austral. Mus. 13 (6): 226. Type species by OD *Pleurotoma acutigemmata* E. A. Smith, 1877. Recent, Indo-Pacific.

Turridrupa astricta (Reeve, 1843) (Fig. 32)

1834. *Pleurotoma interrupta* Sowerby, Proc. Zool. Soc. Lond. for 1833: 138 (*non* Lamarck, 1816).
1843. *Pleurotoma astricta* Reeve, Conch. Iconica 1: pl. 12, fig. 98 (*nom. subst. pro P. interrupta* Sowerby, 1834).
1967. *Turridrupa astricta astricta* (Reeve), Powell, Indo-Pacific Moll. 1 (7): 419, pl. 305, fig. 4.
1978. *Turridrupa astricta* Reeve, de Vaul, Hawaiian Shell News 26 (7): 11, textfig.

TYPE LOCALITY. Anaa I, Tuamotu Archipelago.

Type specimen. The lectotype of *T. astricta* is in the British Museum (Natural History), London, length 13.5 mm, width 5.0 mm.

The species was previously known only from the Tuamotu Archipelago, but recently specimens have been collected off Koko Head, Oahu, Hawaiian Is, 18 m (*leg.* E. de Vaul) where it is sympatric with *T. consobrina* Powell, 1964, a taxon which will have to be elevated to specific rank. Another specimen has been collected as far west as Orote Pt., Guam I, Marianas Is, 18 m-22 m (*leg.* A. Deynzer), length of illustrated specimen 16.1 mm, width 4.3 mm (Fig. 32). The protoconch of *T. astricta* consists of 4¼ whorls, with the first whorl being smooth and remaining 3¼ embryonic whorls being axially costate.

Family CONIDAE

Genus **Conus** Linnaeus, 1758

Conus Linnaeus, 1758, Syst. Nat. ed. 10: 712. Type species by SD (Children, 1823) *C. marmoreus* Linnaeus, 1758.

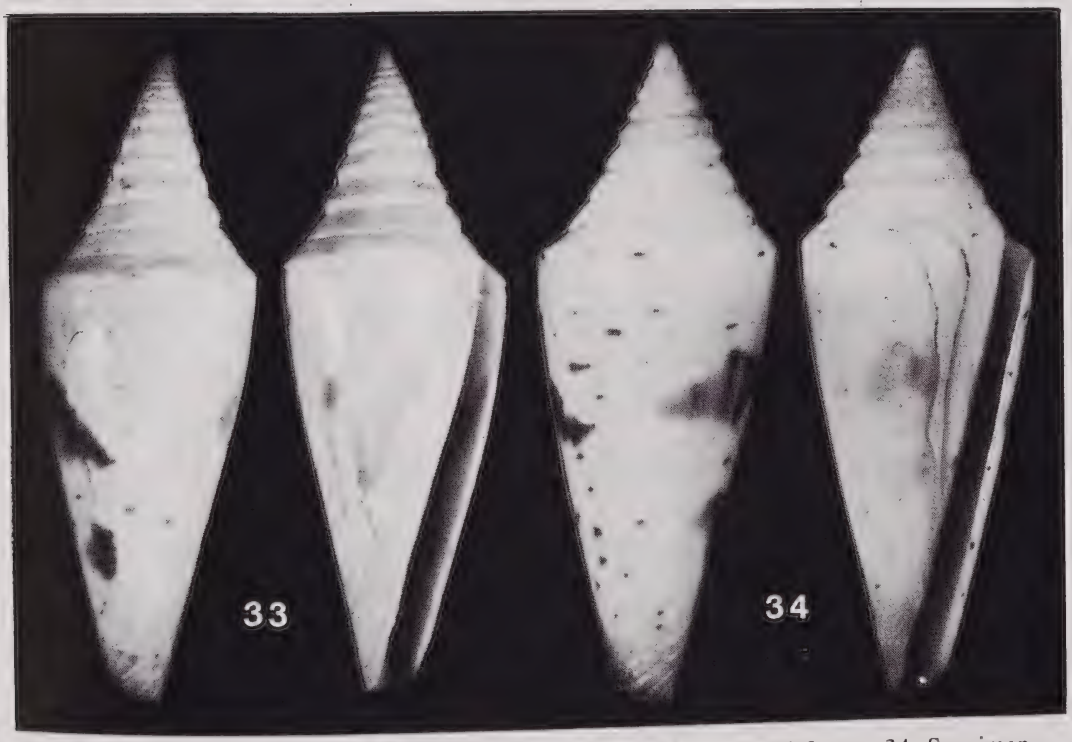
Conus spiculum Reeve, 1849 (Figs. 33, 34)

1849. *Conus spiculum* Reeve, Conch. Iconica 1: Suppl. pl. 7, sp. 266; 1858 Sowerby, Thes. Conchyl. 3 (18): 16, pl. 202, fig. 362; 1884 Tryon, Man. Conch. 6: 32, pl. 9, fig. 62; 1937 Tomlin, Proc. Malac. Soc. Lond. 22 (5): 310.

TYPE LOCALITY. Cagayan, Mindanao I, Philippine Is, 25 fathoms (46 m).

Type specimen. The illustrated syntype of *C. spiculum*, length 23.2 mm, width 8.0 mm, is in the British Museum (Natural History), London, (Fig. 33).

Weinkauff (1875) erroneously placed *C. spiculum* Reeve in the synonymy of *C. longurionis* Kiener, 1845, while other authors merely repeated Reeve's original description and illustration.



Figs. 33, 34. *Conus spiculum* Reeve. 33. Syntype BMNH, length 23.2 mm. 34. Specimen from Simpson Harbour, Rabaul, New Britain; 19.1 mm.

Recently a specimen has been dredged between Vulcan and Beehives, Simpson Harbour, Rabaul, New Britain, in 91 m (*leg*. B. Parkinson). The specimen measures 19.1 mm in length and 6.3 mm in width, has 9 smooth, mature whorls which are carinated centrally and 3 embryonic whorls; the first 3-4 whorls are nodulose and the last 5-6 smooth except for faint, arcuate axial striae and the shoulder is smooth. The spire is long,

the body whorl and aperture narrow and the base has *c.* 9 oblique cords; it is white in colour, ornamented with wide-spaced rows of small brown spots and 3-4 larger, smudged, reddish spots (Fig. 34).

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